

New and Rare Malayan Plants.

SERIES XII.

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The forest of the Malay Peninsula still continues to supply to the botanist many new and interesting species: and it will doubtless be many years before it becomes difficult to add to the list of our flora. The following additions continue the series published in the Journal of the Straits Branch of the Royal Asiatic Society. Some of them are of plants collected by myself in Selangor, and in a short but productive excursion to Bukit Tangga in Negri Sembilan in December 1920, and to the Semangkok Pass in January 1921. Others were collected by Mr. H. C. Robinson, C. B. Kloss and Mr. Seimund in various parts of the Peninsula.

The Bukit Tangga locality is 14 miles from Seremban where there is a small rest house situated at the top of the pass to Jelevu. The hill behind the bungalow rises to about 2,400 feet elevation and is densely afforested to the top. Although generally speaking this area has a flora closely resembling that of the Selangor hills, it contained quite a number of novelties which are certainly absent from Selangor. Many years ago Mr. Cantley had a collector in this district and it was probably near here that he obtained a number of plants never since collected.

POLYGALACEAE.

Polygala (Chamaebuxus) pulchra, Hassk. Flor. XXV. 142.
Beibl. 32.

A slender woody shrub about 4 feet tall. Leaves membranous thin, oblong-lanceolate; nerves slender, 9 pairs; 8 in. long, 3 in. wide; petiole .25 in. long. Racemes short, about 1 in. long, pendulous. Sepals 2, outer ones short, one saccate ovate acute, the other smaller ovate, green petaloid. Sepals ovate round, .25 in. long. Petals 2, short, oblong blunt; keel 4-lobed, fleshy, not crested. All white tinted yellow. Capsule obovoid orbicular, deeply retuse, not winged except at the tip, green tipped purple or nearly all purple violet, .2 in. long, .3 in. wide. Seed subglobose, aril scarlet.

Hab. In hill woods, Negri Sembilan, Bukit Tangga, *Ridley*. Selangor, Ginting Bidai, *Ridley*. Also in Java and Sumatra.

This species is quite distinct, especially in life, from *P. venenosa* in its slender woody stem, its thinner leaves, short racemes not elongating to 5 inches long or more, the smaller flowers with small obovate rounded petaloid sepals and the smaller capsule not winged along the sides. It is not so striking a plant as the great succulent *P. venenosa* so common and conspicuous in our forests, nor are the flowers so brightly coloured in spite of its name.

MELIACEAE.

Turraea breviflora Ridley, n. sp.

A glabrous shrub. Leaves thin membranous, alternate, lanceolate acuminate cuspidate, narrowed and cuneate at the base, nerves about 10 pairs distinct beneath; 6.5 in. long, 2 in. wide; petiole .3 in. long. Flowers 3 or 4 on a very short .1 in. long axillary pubescent raceme, green; pedicels very short. Bracts minute ovate. Sepals connate at base with 5 short acute points. Petals 5, linear blunt, .25 in. long. Stamen-tube stout cylindric, shorter than petals with rather long filaments alternating with the anthers from the top of the tube; anthers elliptic 10, sessile with a long terminal process. Disc short and thin, lining the base of the tube. Style rather stout, hairy. Stigma capitate. Ovary conic hairy.

Hab. In woods; not common. Singapore, Serangoon, *Ridley* 9114; Selangor, Ulu Selangor, *Goodenough* 10612; Kanching, on limestone rocks, *Ridley*.

This species is very unlike the others of the genus in its very short green flowers, but there are a few in Africa which resemble it to some extent. The fruit has not been collected and till it is known it would be better to leave this plant in the genus *Turroea* to which at least it is nearest.

RHAMNACEAE.

Zizyphus pernettyoides Ridley, n. sp.

A spiny creeper with slender stems covered with scattered brown hairs. Leaves ovate acuminate, base round obscurely crenulate, coriaceous sparsely hairy on the edge, nerves 3, prominent and reticulations conspicuous when dry; .5 in. long, .25 in. wide; petiole very short hairy, spines straight slender .25 in. long. Flowers .1 in. wide, greenish yellow in axillary fascicles of three in upper axils; pedicels very short .1 in. long. Sepals 5, triangular ovate with a few long hairs at the tips. Petals 5, half as long, spoon-shaped, clawed with an elliptic blunt limb. Stamens 5, very slender wrapped in the petals. Disc fleshy filling the tube. Ovary sunk in the disc with 2 short stigmas.

Hab. Iankawi, Dayang Bunting, *Robinson* 6193. Creeper; flowers greenish yellow, December 7, 1916.

A remarkable little plant with the smallest leaves of any *Zizyphus* known to me.

MYRTACEAE.

Eugenia alata Ridley, n. sp.

Tree, glabrous; branches 4-angled and winged in the upper part with 4 low wings along the angles. Leaves thinly stiff cori-

aceous, elliptic acuminate cuspidate; nerves 14 pairs prominent beneath, secondaries nearly as prominent, intramarginal nerve .1 in. from the edge, midrib prominent beneath; 6 to 8 in. long, 2.5 to 5 in. wide; petiole thick, grooved, above. Corymb compound, cymes 4 in. long and wide. Flowers numerous, congested at the branch ends; branches flattened, 4-angled. Calyx and pedicel club-shaped .2 in. long. Corolla small calyptrate. Stamens short and rather few.

Hab. Selangor, Semangkok Pass, track to Bukit Tegala, *Ridley*.

The flowers were in young condition and may perhaps when fully developed be larger. In one tree the inflorescence bore numerous bodies like round flattened lobed fruits; these proved to be flowers aborted by a number of galls in the ovary. The petals appear to be completely joined together so that it belongs to the calyptrate section, the curiously angled and winged branches and inflorescence branches is different from any other species I have seen.

ARALIACEAE.

Trevesia rufo-setosa Ridley n. sp.

A shrub with the habit of *Trevesia sundaica* Miq. Leaf palmate of seven lobes, base cordate, lobes more or less elliptic shortly cuspidate, edges undulate with short upcurved thorns, above glabrous except the nerves, and centre red-hairy and covered with small raised dots apparently hair bases; nerves 9, two on the lowest lobes, whole about 12 inches long and wide, the lobes cut down for 9 inches, and 3 to 4 inches wide, the lowest pair dilate on the lower edge at the base; petiole stout at the base and narrower upwards, 2 feet long, densely covered with red brown bristly hairs nearly .2 in. long. Inflorescence 8 in. long, flexuous, stout with a few short branches densely covered with similar hairs. Flowers unisexual on the same inflorescence .25 in. across with pedicels .4 in. long in umbels subsessile on the branches. Bracts linear acuminate caudate, very narrow .5 in. long. Calyx obconic densely red hairy; limb very short and obscure, lobed. Corolla stellate, spreading, lobes 5, triangular hairy beneath, coriaceous. Stamens 5, glabrous; filaments thick at base as long as the corolla; anthers large ovate cordate. Style in female flowers rather tall cylindric; stigma bifid with two short lobed oblong arms recurved. Ovary 5-celled.

Hab. Hill forests. Selangor, Semangkok Pass at 2500 feet alt., *Ridley*.

Nearest to *T. Beccarii* Boerlage, of Sumatra; but the dense indumentum of red brown hairs flattened at the base and acuminate covering the petiole and the whole of the inflorescence except the inner face of the petals, stamens, style and disc, is very distinct. The few stamens, 5 only, is also unusual.

RUBIACEAE.

Tarennia calcarea Ridley, n. sp.

A shrub with white shining branches. Leaves membranous ovate cuspidate with a long point drying black; base cuneate; nerves 4 to 5 pairs; 4 to 5 in. long, 2 to 3 inches wide; petiole 1 in. long, slender. Stipules short, broad, triangular with short points. Cymes 1.5 inches long, terminal, lax, few-flowered; peduncles .25 inches long. Bracts short lanceolate acute. Calyx very small under .05 in. long, cup-shaped with 5 short acute points. Corolla-tube cylindric, rather thick, .12 inches long, lobes oblong, blunt nearly as long; anthers acuminate nearly as long as the sepals. A little white hair at the base of the corolla-lobes.

Hab. Limestone rocks. Perak, Ipoh, *Ridley*.

Its set of *Tarennas* are somewhat closely allied and this is nearest to *T. adangensis* Ridley, but the leaves are larger and thinner and the corolla rather small, the throat being only sparsely white hairy. Nearly all of the set are inhabitants of limestone rocks and each area of limestone seems to have a distinct species or variety.

Pavetta indica Linn.

This species was based mainly on a drawing of Rheede's Hortus Malabaricus v. p. 19, t. 20. and in the Flora of British India, nearly all the *Pavettas* with large corymbs are put underneath *Pavetta indica* as the species intended by Linnaeus or as varieties of it. It seems to me however, that there are a good many distinct species included in *Pavetta indica* Hook. fil., Flora of British India iii. p. 150.

I make out the following species.

Pavetta indica var. **canescens**. *P. canescens*, Wallich Cat. 6181, Singapore.

Bush; branches softly velvety hairy. Leaves thin, lanceolate narrowed to the base with the nerves and sometimes the whole leaf beneath softly thinly hairy 6 to 8 in. long, 1.75 to 3 in. wide; petiole 1 to 1.25 in. long. Corymbs 2 in. long, 3 in. wide on a peduncle 2 inches long or less, pubescent. Stipules ovate with a long terete point. Flowers white; pedicels slender .1 in. long, pubescent. Calyx very small, cup-shaped with very short points pubescent. Corolla-tube .5 in. long, slender, lobes oblong blunt, .1 in. long. Style .6 in long.

Hab. Singapore, *Wallich*; Kranji, *Ridley* 2880. Malacca, *Griffith*. Negri Sembilan, Johol. Selangor, Ginting Sempah, *Robinson and Kloss*. Perak, Gunong Hijau, *Mohamed Haniff and Mohamed Nur*, 2451, flowers shorter. Changkat Mentri, *Kloss* 6510, nearly quite glabrous.

Var. typica.

Similar but glabrous. Leaves smaller. Flowers shorter, corolla-tube much thicker.

Hab. Perlis, Chuping, *Ridley* 14991.

P. tomentosa Roxb. ex Smith in Rees Cyclop. XXVI. No. 2.

P. indica var. *tomentosa* Hook. fil. Fl. Brit. Ind. iii. 150 (in part).

Shrub; stem, underside of leaves and inflorescence densely soft velvety tomentose. Leaves thickly membranous drying black, above sparsely hairy; midrib tomentose elliptic-lanceolate, 3 to 5 inches long, 1.5 to 1.75 in. wide; nerves 9 pairs not distinct above; petiole 1 inch long. Stipules ovate cuspidate, tomentose. Inflorescence on short lateral leafy branches and terminal, branches 3 inches long. Corymb 3 inches wide; pedicels rather slender, .25 in. long. Calyx small; limb short with 5 short acute points. All tomentose. Corolla-tube .12 to .25 in. long; lobes oblong, subacute .1 in. long or less. Fruit globose, .15 inches through when dry.

Hab. Singapore, Changi. Johor, Batu Pahat and Sedenak. Malacca, *Maingay*, *Griffith*, *Cuming* 2304; near the town of Malacca, *Ridley*.

Distrib. India.

P. graciliflora Wall. Cat. 6178. *P. petiolaris* Wall. Cat. 6186.

Glabrous shrub about 6 feet tall. Leaves thin, elliptic-lanceolate cuspidate acuminate, base long narrowed; nerves 8 pairs in-arching well within the margin, 7 in. long, 2 inches wide; petiole slender .5 in. to 2 in. long. Stipules triangular blunt. Inflorescence borne on lateral branches, 6 to 8 inches long, base except for a pair of leaves usually smaller at the top. Corymbs many flowered, 3 to 4 in. wide, lax. Pedicels very slender, filiform .25 to .5 in. long. Calyx very small; limb cup-shaped with 5 minute points. Corolla pure white, tube slender, .75 in. long, lobes oblong blunt, narrow .12 in. long. Style .5 in. longer. Fruit globose pear-shaped, grey green to black, .25 in. through.

Hab. Common in forests; a very pretty shrub. Malacca, Chabau forests, *Griffith*. Negri Sembilan, Bukit Tangga at 2000 ft. alt., *Ridley*. Selangor, Menuang Gasing, *Kloss*; Sempang, *Ridley* 15663, a form with lanceolate leaves 4 in. long, .75 in. wide; Ginting Sempah, *Ridley*. Perak, Ulu Bubong, *Kunstler* 10202; Temengoh; Tapah. Penang, *Wallich and Maingay*. Kelantan, Chaning, *Ridley*. Kedah, Kedah Peak, *Robinson and Kloss* 6119.

This species was referred by King to var. *polyantha* Hook. fil.,—a distinct Indian plant. Wallich had a specimen from Finlayson in flower, No. 6178, and one from Penang in fruit 6186, and did not recognise them as the same thing. The plant varies chiefly in the size of the leaves. A plant obtained by me in Kelantan has leaves nearly 12 in. long, and 3.75 in. wide, and the pedicels are much shorter than in the type.

***P. pauciflora* Ridley, n. sp.**

A small glabrous tree. Leaves thin, elliptic lanceolate, long acuminate, acute, long narrowed to the base; nerves 6 pairs in-arching; 4 to 6 in. long, .5 to 1.5 in. wide; petiole slender, .5 in. long. Stipules triangular, cuspidate. Corymb very lax, 1.5 in. long with three very slender branches one inch long bearing cymes of three or more flowers on filiform pedicels .5 in. long. Bracts at base of branches stipuliform rather large. Calyx-tube subglobose with 4 short lobes. Corolla white, tube very slender .5 in. long, lobes 4, oblong blunt, .2 in. long. Stamens as long: anthers linear twisted. Style projecting for .5 in. long. Stigma gradually clavate. Fruit globose crowned with the tubular calyx.

Hab. Dense forests on limestone rocks. Selangor, Batu Caves, Dec. 1920, *Ridley*.

Allied to *P. graciliflora* Wall. but differing in the lanceolate leaves with very much smaller cymes and fewer flowers, more slender and smaller, and anthers as long as the corolla-lobes.

***Psychotria lanceolaria* Ridley, n. sp.**

Slender shrub, glabrous. Leaves lanceolate acuminate, long narrowed to the base, membranous; nerves 10 pairs, slender forming bold arches within the margin, 6 in. long, 2 in. wide; petiole very slender 1.5 in. long. Stipules ovate acuminate, .12 in. long. Cyme 1 in. wide and as long; peduncle .25 in. long; branches few and few flowered; bracts and branch bases large like the stipules. Flowers small on very short slender pedicels. Calyx cup-shaped with 4 short ovate acute points. Corolla .1 in. long, tube longer than calyx silky within, lobes as long as tube oblong blunt. Fruit .2 in. long, globose, very obscurely 4-ridged.

Hab. Selangor, Batu Caves, *Ridley*.

Near *P. minutiflora* Ridley and *rostrata* but the larger flowers and differently shaped calyx distinguishes it from the former and the narrow leaves and more condensed cyme from the latter.

***Psychotrea atroviridis* Ridley, n. sp.**

Shrub 12 in. tall; stem hairy. Leaves oblanceolate-obovate, coriaceous glabrous; midrib prominent, nerves 11 pairs prominent on both sides, 7 in. long, 4.25 in. wide; petiole .5 in. long, thick. Stipules oblong. Cymes 3, terminal 1 in. across. Peduncle 2 in. long. All puberulous. Flowers many, white, very shortly pedicelled. Calyx cup-shaped with 5 short ovate blunt lobes. Corolla-tube as long, lobes oblong, blunt. Fruit ellipsoid slightly flattened with 12 ribs, .25 in. long.

Hab. Negri Sembilan, top of Bukit Tangga, at 2500 ft. alt., *Ridley*.

Allied to *P. stipulacea* but quite dwarf, almost stemless, the leaves larger and the inflorescence puberulous.

Cephaelis melanocarpa Ridley, n. sp.

Shrubby plant 3 feet tall, glabrous. Leaves narrow oblanceolate acuminate cuspidate, long narrowed to the base; nerves 20 pairs, curved ascending, paler beneath; 8 in. long, 2 in. wide; petiole slender, 1.5 in. long. Stipules broad blunt oblong-ovate. Peduncles stout, white and fleshy in fruit, 2 to 3 in. long. Bracts lanceolate, keeled and cuspidate 1 in. long. Flowers not seen. Fruit black elliptic narrowed to the base, .25 in. long. Seed flattened, ellipsoid with both edges keeled and a central rib, making in fruit when dry 4 ribs.

Hab. Negri Sembilan, forests near the top of Bukit Tangga Ridley.

Dried specimens much resemble *C. singapurensis* Ridley but the lanceolate mucronate bracts distinguish it and in life the swollen white peduncle and black, not pale blue, fruits distinguish it readily.

Spermacoce Linn.

This genus was originally based on several species of small herbs from S. America and two Asiatic ones of which one, *Spermacoce hispida*, occurs in our area, but lately this latter with a number of other Asiatic species has been separated from the American ones under the name of *Borreria*, while the *Spermacoce sarmentosa* Bl. is separated under the name of *Diodia sarmentosa* Sw. It is not rare in the Malay Peninsula, and occurs also in Banca, Java and Sumatra, and also in S. America whence it has probably been introduced into Asia. *Diodia* differs from *Borreria* in the cocci of the fruit, not dehiscing on the inner face. Of *Borreria* we have the following species in the Malay Peninsula.

1. **Borreria latifolia** K. Schum. in Mart. Fl. Brazil, vi. 63.

This was the plant described by me by error as *Diodia sarmentosa* in Journ. Roy. As. Soc. S. Br. 73, p. 145. It first appeared in Singapore in 1915, and curiously no specimens have been seen from any other part of the Old World. It is a native of S. America.

2. **B. hispida** K. Schum. in Engl. Pflanzenfam. iv. 4, p. 144.
Spermacoce hispida Linn. Sp. Pl. 102.

This is common all over the Peninsula and occurs in India and the Malay islands. It does not appear to have been met with in S. America and is the only species with pink flowers.

3. **B. laevicaulis** Ridley. *Bigelovia laevicaulis* Miq., Fl. Ind. Bat. ii. 335. *Spermacoce stricta* King, in Journ. As. Soc. Beng. p. 90, 189, not of Linnaeus.

Common in the Malay Peninsula and occurring in Bombay and Java.

4. **B. setidens** Ridley. *Bigelovia setidens* Miq., Fl. Ind. Bat. ii. 336.

Common all over the Malay Peninsula and occurring in Java.

5. *B. pilulifera* Ridley, n. sp.

Slender erect, branched herb with few branches 14 in. tall; stems angled, ciliate along the angles. Leaves elliptic-lanceolate, narrowed to the base, rather fleshy, glabrous, pale beneath; nerves 5 pairs, 1 in. long, .4 in. wide; petiole .1 in. long; 2 shorter leaves usually at the base of the heads. Stipules very short, with short bristle. Heads .25 in. through, numerous bristles between the flowers. Calyx glabrous bifid. Corolla very short, white. Capsule obovoid. Seed rather large ellipsoid, dark brown, very obscurely reticulate.

Hab. Roadsides, Selangor, Klang Gates, *Ridley*.

6. *B. parviceps* Ridley, n. sp.

Very slender erect herb, simple or with one or two branches; stems angled with low wings, glabrous, 18 in. tall. Leaves in simple pairs lanceolate acute and narrowed to the base sprinkled with white hairs above, paler and scabrid beneath, .5 in. long, .25 in. wide; nerves 3 pairs sparsely hairy beneath; no petiole. Stipules very short with very numerous setae. Heads .12 in. through; flowers small with fewer and shorter bristles than the last. Calyx glabrous, bifid. Corolla white, very short. Capsule smooth glabrous. Seeds ellipsoid, dark brown, smaller than the preceding and deeply pitted.

Hab. Roadsides, Negri Sembilan, Bukit Tangga Pass, *Ridley*.

MYRSINACEAE.***Embelia subcordata* Ridley, n. sp.**

Slender climber; branches covered with red brown glandular hairs. Leaves distichous, oblong-lanceolate, blunt base broad subcordate, chartaceous, densely gland-dotted beneath glabrous except the hairy midrib; nerves very faint, about 10 pairs, 1.5 in. long, .6 in. wide; petiole hairy very short under .1 in. long. Flowers minute in axillary fascicles of 2 to 5; pedicels puberulous, .025 in. long. Calyx-lobes 5, ovate blunt, glabrous with 8 red glands outside. Corolla twice as long, lobes ovate, blunt, glabrous except the ciliate tip. Anthers oblong ovoid with 4 warts on the back. Pistil glabrous.

Hab. Selangor, Semangkok Pass on the track to Fraser's hill, *Ridley*.

This species has the appearance of *E. pulchella* of Siam, but the flowers are much smaller and almost completely glabrous.

APOCYNACEAE.***Ervatamia pauciflora* Ridley, n. sp.**

Shrub about 8 feet tall; bark pale whitish. Leaves thin membranous elliptic, blunt cuspidate, base narrowed, 7 inches long, 3 in. wide; nerves 10 pairs; nervules invisible; petiole .75 in. long.

Cymes in upper axils: peduncle .25 in. long; pedicels .5 in. long. Flowers white, 2 to 3 in a cyme. Calyx-lobes separate half way down oblong blunt, edge ciliate, whole calyx .1 in. long. Corolla-tube cylindric .5 in. long, lobes linear blunt. Stamens small; anthers oblong not apiculate. Style very slender. Follicles oblong narrowed and acute at both ends falcate, 1.25 in. long, .5 in. thick.

Hab. Mountain forests, Selangor, Ginting Sempah, *Ridley*.

Var. **minor** *Ridley*.

Leaves 4 in. long, 1 in. wide with about 8 pairs of nerves; petiole .2 in. long. Peduncle .1 in. long; pedicels .2 in. long. Calyx .8 in. long. Corolla-tube .6 in. long; lobes linear blunt, .25 in. long.

Hab. Negri Sembilan, Bukit Tangga at 2400 ft. alt., *Ridley*.

Allied to *E. jasminiflora* *Ridley*, but the flowers are smaller with shorter corolla-tube and small stamens.

ASCLEPIADACEAE.

Hoya citrina *Ridley*, n. sp.

Stout, long, pendent plant. Leaves thick, fleshy stiffly coriaceous ovate, base broad, round, subcordate; nerves three conspicuous when dry with about 4 pairs of lateral nerves from the central nerve broken up into reticulations large and lax, 4 to 4.5 in. long, 3 in. wide; petiole very thick .75 in. long. Peduncles stout, 2.24 in. long; raceme thickened lengthening to over 1 in. long with very numerous close set broad bracts. Pedicels .6 in. long. Flowers 3 in. wide; sepals ovate blunt. Corolla-lobes triangular ovate acute, light yellow. Corona pinkish red, lower lobe long acute, lanceolate.

Hab. Limestone precipices, Selangor, Batu Caves, *Ridley*. Perak, Ulu Bubong on a tree in jungle, *Kunstler* 10316; Batu Kurau, *Scortechini* 1626.

The Perak plants were referred by King and Gamble to *H. parasitica* Wall. from which they differ in the ovate cordate leaves, with three distinct nerves from the central one of which rise about 4 pairs of lateral nerves quickly broken up into reticulations. The flowers are very similar in both species except in colour, these being yellow with a red corona; those of *H. parasitica* pinkish white with a white corona, the corolla-lobes in this species are also triangular acute, not cordate.

Cynanchum Seimundii *Ridley*, n. sp.

Herbaceous climber, glabrous except inflorescence. Leaves thin membranous, ovate acute, base cordate; nerves 6 pairs, 6 in. long 5 in. wide; petiole 3 in. long or smaller. Corymbs axillary; peduncle 1.5 in. long. Flowers about 20; pedicels .5 in. long puberulous. Calyx-lobes very short, rounded ovate. Corolla .25 in. across, tube very short, lobes valvate lanceolate acute, spotted at the tips.

Corona fleshy at base attached to the corolla above with lanceolate retuse lobes shorter than the stamens. Anthers square, truncate with 3 inflexed points. Pollinia pendulous oblong with a long slender pedicel.

Hab. Pahang, Kwala Tahan, *Seimund*.

LOGANIACEAE.

Gaertnera ovata Ridley, n. sp.

Woody shrublet. Leaves glabrous, broadly obovate, shortly cuspidate, base narrowed gradually; nerves 9 pairs prominent beneath, 9 in. long, 4 in. wide; petiole winged to the base, .25 in. long, stout. Stipules connate rather large with a broad lanceolate point. Peduncles below the leaves slender, 3 in. long with 2 branches and distant stipules forming a tube with the midribs prominent and ending in mucros as long as the tube, slender acute. Cymes small 1 in. long with about 6 short branches, the lowest under .5 in. long. Flowers sessile about 4 in a small head at the end of each branch. Calyx short, cup-shaped with very short points. Corolla .1 in. long, tube thick shorter than the lobes, the lobes oblong round at tip, white, hairy at mouth of tube.

Hab. Selangor, Semangkok Pass, *Ridley*.

Gaertnera rigida Ridley, n. sp.

Low shrub about 3 feet tall, quite glabrous. Leaves stiff, rigid drying grey, coriaceous, lanceolate acuminate, long narrowed to the base, smooth shining above with prominent midrib, beneath minutely papillose all over; nerves 8 or 9 pairs with the nervules and reticulations prominent beneath, 9 in. long, 3.5 inches wide; petiole 1.25 inches long flattened above and slightly winged to the base. Stipules .75 inches long, forming a tube split on lower face half way down and prolonged into a lanceolate bifid point above. Inflorescences borne on long lateral branches 9 inches long bare except for a pair of narrow lanceolate acuminate leaves 4 in. long, .75 inches wide at the top subtending the inflorescence. Cymes 1 in. long of 3 branches. Calyx-lobes very short. Flowers not seen. Fruit globose or double with one or two seeds .25 in. through.

Hab. Dense forest, Negri Sembilan, Bukit Tangga, base of hill, *Ridley*.

I was unable to find flowers of this species: in foliage it resembles *G. lanceolata* Ridl., but the inflorescence is very short.

CONVOLVULACEAE.

Ipomoea Pes-Caprae Roth.

I was surprised to find a considerable sized patch of this sea-shore plant on a track leading to a saw-pit at Bukit Tangga. It was flowering and fruiting well. I have seen it some way from the sea

on a sandy bank on the railway near Kota Bharu in Kelantan, but never before as far from the sea shore as at Bukit Tangga, about 35 miles away. It is probable that a cart load of seasand containing seeds of this convolvulus had somehow been sent to this spot, and the seeds had germinated and grown on a sandy spot near the stream edge where I found it.

CYRTANDRACEAE.

Didissandra castaneaefolia Ridley, n. sp.

Stem 3 in. tall. Leaves oblong to lanceolate-oblong, base narrowed minutely unequally cordate, edge coarsely serrate, membranous glabrous above; nerves 15 pairs and midrib coarsely hairy beneath 5.5 to 7 in. long, 1.75 to 2 in. wide; petiole 1.75 to 3 in. long, coarsely hairy. Peduncles 4 in. long, coarsely hairy. Flowers in a terminal cyme of 3. Bracts linear-oblong, .12 in. long. Sepals lanceolate acuminate, blunt .3 in. long, .1 in. wide, hairy. Corolla .75 in. long sparsely short hairy, lobes small, limb .4 in. wide (when dry).

Hab. Pahang, Kwala Teku, *Seimund*.

I have no clue as to the colour of the flowers of this species which is most nearly allied to *D. glabrescens* Ridley, but it is much more hairy and has more and smaller flowers.

Didymocarpus castaneaefolia Ridley, n. sp.

Stem erect, woody over 4 in. long, .2 in. thick corky. Leaves chartaceous lanceolate elliptic subacute, base cuneate, edge closely serrate, glabrous above except the midrib and nerves in young leaves; nerves about 25 pairs parallel, sunk above inarching within the margin, 5 in. long, 2 in. wide; petiole .5 in. long, hairy. Scapes 1 in. long hairy, in upper axils with about 5 flowers, the lower pair distant from the terminal ones. Bracts narrow lanceolate linear, green hairy .4 in. long. Pedicels .25 in. long, purple hairy. Sepals lanceolate-acuminate .12 in. long. Corolla 1.5 in. long, tube cylindric at base gradually dilate upwards, limb .5 in. wide, lobes blunt rounded. Capsule 2.5 in. long, narrow, cylindric.

Hab. Mountains at 5,000 ft. Perak, Gunong Inas, *Yapp* 438.

Allied to *D. venusta* but the leaves more closely serrate and distinctly petioled.

Loxocarpus minimus Ridley, n. sp.

Small stemless herb. Leaves 2 or 3 ovate to oblong-lanceolate or oblanceolate, densely white silky all over, .5 to .75 in. long, .2 to .25 in. wide; petiole .5 in. long or less. Peduncle 1.5 in. long slender, silky bearing one to two flowers at the top. Pedicel .1 in. long. Bract small linear. Sepals lanceolate .10 in. long, silky. Corolla hardly longer campanulate, .2 in. long, light blue-violet,

sub-regular, hairy outside. Style longer; stigma large, round. Capsule ovoid beaked, hardly longer than calyx, splitting on the upper edge. Seeds oblong acute, pitted reticulate, dark green.

Hab. On two damp rocks in the forests, Negri Sembilan, Bukit Tangga, *Ridley*.

This remarkable little plant differs from the typical *Loxocarp* in the short regular corolla and ovoid capsule which however, dehisces normally on the upper edge.

***Cyrtandra patula* Ridley, n. sp.**

A big spreading shrub about 6 feet tall, bark corky wrinkled transversely pale, below glabrous; young parts tomentose. Leaves opposite, chartaceous oblanceolate acute, base long-narrowed blunt, edge serrate, glabrous above; nerves slender 15 pairs and midrib hairy beneath; young leaves thickly tomentose, 11 to 12 inches long, 4 inches wide; petiole thick .25 to .5 in. long, when young densely tomentose eventually glabrous. Cyme .4 in. long with about 7 or 8 flowers, silky hairy. Bracts small, hairy. Pedicels .1 to .2 in. long. Calyx tubular with 5 very slender points silky hairy, .1 in. long, yellowish. Corolla .5 in. long, campanulate, lobes rounded hairy outside, dull white with brown mottling in the throat. Stamens white; anthers connivent. Fruit .5 in. long, slender cylindric, narrowed to the style.

Hab. Negri Sembilan, Bukit Tangga. In muddy streams in dense forest behind the Bungalow, *Ridley*.

Allied to *C. bataviensis* Clarke of Java.

ACANTHACEAE.

***Ebermaiera longispica* Ridley, n. sp.**

Herb over 12 in. tall, quite glabrous. Leaves rather thin, broad lanceolate, narrowed to both ends; nerves 18 pairs parallel; 6 in. long, 2 in. wide; petiole slender, 2 inches long. Inflorescence racemose, racemes solitary axillary solitary or 2 to 4 in a panicle, with peduncle 3 inches long. Flowers numerous distant. Bracts ovate or oblong blunt foliaceous, petioled, .25 in. long and .12 in. wide. Pedicel .1 in. long. Sepals lanceolate acuminate. Corolla .75 in. long, tube narrow cylindric at base, .25 in. long, gradually dilate to limb, .5 in. long, dull pink outside, and within tube, limb lobes blunt, .1 in. long, white. Stamens 4, diadelphous, shorter than tube. Style included; stigma bifid. Capsule oblong .15 in. long.

Hab. Woods, Negri Sembilan, Bukit Tangga. Selangor, Ulu Gombak, *Ridley*.

The only plant this seems to be at all near is *E. Griffithiana* which has the same kind of broad oblong bracts.

Strobilanthes latebrosa Ridley, n. sp.

Big spreading shrub 8 feet tall, glabrous. Leaves chartaceous, ovate-lanceolate cuspidate blunt, base decurrent on petiole, edge undulate; nerves 10 pairs, secondary nerves almost as conspicuous; 9 in. long, 4 in. wide; petiole 1.5 in. long. Flower heads solitary or in threes axillary or on short lateral shoots, 1.25 in. long; peduncle .3 in. long. Bracts numerous, large leaflike, outer ones ovate 1 in. long, .5 in. wide, inner ones linear-lanceolate blunt, narrower, hairy, all green. Corolla 2 in. long, 1 in. across the limb, white, tube slender, cylindric at base .5 in. long, above abruptly dilated, urn-shaped, lobes short, round. Stamens enclosed in tube. Capsule .75 in. long subacute, not dilated at tip, 4-seeded. Seeds rounded ellipsoid.

Hab. Negri Sembilan, Bukit Tangga forests, *Ridley*.

Allied to a Javanese plant named *S. grandis*, Clarke in Herb. Kew, collected by Forbes.

Strobilanthes leucopogon Ridley, n. sp.

Shrubby branches angled glabrous. Leaves chartaceous, lanceolate acuminate narrowed to a blunt sub-truncate base, edge slightly undulate; nerves 7 pairs, elevate, transverse nervules few, sub-horizontal elevate beneath; 6 in. long, 2 in. wide; petiole under .1 in. long. Racemes in terminal axils, on branches .5 in. long with a pair of much reduced leaves at their bases 1.5 in. long, cylindric. Bracts ovate-oblong blunt, .15 in. long, .08 in. wide covered with long white spreading hairs, corolla-lobes narrow linear spathulate, white hairy, shorter than sepals. Corolla .75 in. long pure blue, tube at base slender then funnel-shaped; lobes subequal, mouth .4 in. across.

Hab. Kedah, Lankawi Islands, Dayong Bunting, *Robinson* 6196; flowers pure blue.

This is nearest to *S. niveus*, Craib.

Barleria siamensis Craib, var. **glabrescens** Ridley, n. var.

Plant much smaller in vegetative parts than the type, 12 in. tall, glabrescent. Leaves oblong acuminate rather abruptly, tip blunt, 3.5 in. long, 1.5 in. wide, glabrous above, roughly appressed hairy on nerves and nervules beneath; petiole roughly hairy. Flowers 2 in. long. Bracts ovate hairy on nerves but much more glabrous than in type.

Hab. Kedah, Lankawi Islands, Dayong Bunting, *Robinson*, Nov. 1916.

The type of this, *B. siamensis*, Craib in Kew Bull., 1911, p. 437, was collected at Doi Suteh at 2,300 to 2,500 feet. It attains the height of 5 feet, the leaves 8 in. long by 3 in. wide with a longer acuminate point and the whole plant is much more hairy. The Lankawi plant is dwarfer with smaller leaves, more glabrous.

Gymnostachyum Robinsonii Ridley, n. sp.

Stem shortly creeping, ascending, woody, 2 in. long. Leaves elliptic-ovate to round blunt, base shortly decurrent on the petiole, scabrid above and beneath; midrib above and beneath and 5 pairs of nerves scurfy pubescent 1.25 to 2.25 in. long, 1.1 to 1.75 in. wide; petiole flattened .5 to 1.25 in. long. Raceme 3 in. long, sometimes branched, pubescent, slender. Flowers solitary about 10 in the raceme. Bracts narrow linear pubescent .1 in. long. Calyx shorter, lobes linear acuminate with broader base, very narrow pubescent. Corolla .4 in. long, puberulous.

Hab. Kedah, Lankawi islands, Dayong Bunting, *Robinson*, Nov. 1916.

Allied to *G. diversifolium* but the flowers much smaller.

Eranthemum candidum Ridley, n. sp.

Glabrous simple, shrubby plant. Leaves lanceolate acuminate at both ends, membranous; nerves 8 pairs ascending, 5 to 6 in. long, 1.5 to 2 in. wide; petiole .75 in. long. Raceme 6 in. long; peduncle 6 to 9 in. long. Flowers distant, solitary or paired; pedicels .1 in. long; bracts lanceolate acuminate from a broad base shorter. Calyx puberulous; lobes linear acuminate, .1 in. long. Corolla pure white, tube .5 in. long, base cylindric then about midway thickened upwards; lobes elliptic blunt .5 in. long, by .25 in. wide subequal. Stamens in the base of the dilate portion of the tube.

Hab. Forests by the stream at Ulu Gombak, Selangor, *Ridley*.

This is allied to *E. Kingianum* but has smaller corollas and pedicelled flowers.

Justicia Robinsonii Ridley, n. sp.

Shrubby, glabrous except inflorescence. Leaves chartaceous lanceolate acuminate, base cuneate; nerves 7 pairs, 7 to 10 in. long, 2 to 3 in. wide; petiole .5 in. long. Raceme solitary or paired terminal, subsessile 1 in. long; rachis pubescent. Bracts ovate acute sessile .2 in. long, acute puberulous. Flowers crowded, subsessile. Sepals 5, lanceolate linear acuminate, pubescent. Corolla .25 in. long, tube thick cylindric, little longer than sepals, dirty white spotted purple, upper limb shorter than lower limb, woody, blunt, lower 3-lobed, lobes rather broad blunt. Stamens 2; anther-cells not parallel, shortly prolonged below, slightly shorter than the corolla. Style very slender, filiform. Capsule .5 in. long, lower half fawn-colour pustulate, seeds strong retinacula.

Hab. Kedah, Lankawi islands, Dayong Bunting and Burau, *Robinson 6191*. Shrubby plant. Flowers dirty white spotted purple.

Justicia microcarpa Ridley, n. sp.

A thin, weak plant, glabrous. Leaves lanceolate ovate thin, very shortly bluntly narrowed to base; nerves 10 pairs 6 in. long, 2 in. wide; petiole 1.75 in. long. Racemes solitary axillary and terminal. 2 in. long. Flowers crowded, secund. Bracts lanceolate acuminate slightly shorter than the calyx. Sepals linear acuminate. Corolla .3 in. long, cream with pink spots in the mouth. Fruit .4 in. long. Seeds 4, ovoid, flat acute, pustular.

Hab. Selangor, Batu Caves, *Ridley*.

Allied to *J. uber* but smaller, weaker with differently coloured flowers and very small fruit with seeds of a different shape.

Sphinctacanthus malayanus Ridley, n. sp.

Shrub about 2 feet tall; stems pale fawn colour. Leaves membranous, lanceolate acuminate, base cuneate, glabrous above, sparingly short hairy beneath especially on the midrib; nerves 8 pairs ascending and inarching 6 to 8 in. long, 1.5 to 2.75 in. wide; petiole .5 in. long. Panicle racemiform, 7 in. long, with many short branches .5 in. long to .75 in. in fruit, all hairy; peduncle 3 to 4 in. long. Flowers white, 2 to 7 on a branch. Bracts very small lanceolate. Sepals free to base lanceolate subulate .08 in. long. Corolla .25 in. long, tube cylindric limb 2-lipped, upper lip oblong bilobed longer than the lower lip. Stamens 2 in the mouth of the tube; anthers elliptic; cells equal and parallel. Style as short. Fruit base solid, .25 in. long above ovoid acute, hairy. Seeds 4, round, flat, strongly pustular, pale.

Hab. Negri Sembilan, forests on Bukit Tangga, *Ridley*.

LORANTHACEAE.**Elytranthe tubaeiflora** Ridley, n. sp.

Stems stout, pale emitting long creeping and rooting suckers. Leaves stiffly coriaceous ovate to lanceolate-acute, base round; nerves about 6 pairs usually invisible; 3 to 3.5 in. long, 1.75 to 2.5 in. wide; petiole thick, .25 in. long. Raceme short, 1 in. long, about 8-flowered; pedicels .1 in. long. Bracts 3, lower one lanceolate, upper smaller, ovate acute, all shorter than corolla-tube. Corolla 3 in. long gradually dilate upwards, trumpet-shaped, .5 in. across at the mouth, lobes 6, narrow-linear lanceolate acute .75 in. long. Stamens 6, very narrow as long as corolla-lobes, anthers basifixed. Style longer; stigma ovoid.

Hab. Perak, Gunong Inas 5,500 at feet, *Yapp 501*.

URTICACEAE.**Ficus patens** Ridley, n. sp.

Large spreading shrub; branches hairy with large pith. Leaves large ovate cordate, lobes at base round: nerves 3 from base, 2 outer with about 7 nervules running to the edge, midrib with 6

pairs of nerves almost opposite, tranverse nervules and reticulations prominent beneath, above sparsely scabrid hairy, nerves densely hairy, beneath shortly bristly hairy on nerves and reticulations, under-side paler than upper; 11 in. long, 9 in. wide; petiole hairy sheathing at base 3 in. long. Figs globose roughly hairy .5 in. through. Peduncle very short. Bracts 3, small ovate, connate hairy. Umbilicus short blunt. Bracts small. Female flowers stalked with 4 spathulate petals, dark purple when dry. Achene oblique round, stalked as long as petals; style long, slender lateral towards the top. Male flowers not seen.

Hab. Selangor, Ginting Sempah; Semangkok; near Kanching, Negri Sembilan, Bukit Tangga Pass, *Ridley*.

This plant is very common along the roads in low jungle in Selangor and Negri Sembilan at about 1 to 4,000 feet alt., but comparatively rarely produces figs. It is a very large spreading shrub with the lower parts of branches bare, about 20 feet tall. It is allied to *F. fulva* but has cordate leaves except in the young state and very different flowers.

***Elatostemma inaequilobum* Ridley, n. sp.**

Herb; stem slender succulent, long creeping ascending to a foot tall, glabrous. Leaves alternate with no trace of the second one of the pair, thin inaequilaterally lanceolate long acuminate, base very unequally bilobed, larger lobe rounded, edge crenate, serrate in the upper half, trinerved the outer pair looped with the nervules joining them, 4.5 in. long, 1.5 in. wide or less; petiole .1 in. long or less. Female heads .12 in. through on slender filiform peduncles .2 in. long axillary. Flowers numerous shortly pedicelled. Sepals 3, very narrow linear caudate with a broader base. Achene ellipsoid, strongly tubercled. Male plants not seen.

Hab. Selangor, Ginting Sempah, *Ridley, Robinson and Kloss*. Tonkin, Rocks on edge of torrents, Mount Bausi, *Balansa 2562*.

This is a very distinct plant of which we have only females. The completely alternate leaves and small heads with very narrow sepals and slender peduncles are unlike those of any other species I have seen. The leaves in the Tonkin plant are much smaller than in the Selangor one, which with the long rhizome is over 2 feet long.

ORCHIDACEAE.

***Thrixspermum iodochilus* Ridley, n. sp.**

Stem 4 in. long, 2 in. wide; sheaths strongly ribbed. Leaves coriaceous, oblong-linear, 3 to 5 in. long, .5 in. wide. Peduncle 2 in. long. Raceme flat 1.5 in. long or more. Bracts flat, boat-shaped. Flowers on pedicels slender .3 in. long. Sepals and petals triangular lanceolate at base with very slender tails, .75 in. long, ochre yellow, not spotted; spur short blunt, .12 in. long, pink. Lip violet, narrow, tongue-shaped .25 in. long.

Hab. Negri Sembilan, Bukit Tangga Pass, on trees, *Ridley*.

This has quite the habit of *T. arachnites*, but apart from the colouring of the flowers, the peculiar long slender lip distinguishes it clearly.

APOSTASIACEAE.

Neuwiedia ocrea Ridley, n. sp.

Stem below leaves 1.5 in. long. Leaves 7 or 8 elliptic, long acuminate, 10 in. long, 2.25 in. wide; petiole 4 in. long, strongly ribbed. Raceme 5 in. long. Bracts at base lanceolate acuminate .75 in. long above .5 in. long, terminal ones .2 in. long all but the lowest hairy and conspicuously nerved. Flowers about 40, buff colour, glandular hairy; pedicels hairy .1 in. long. Sepals and petals .5 in. long lanceolate with small caudicles at tip. Petals narrower than sepals, keeled; keel hairy. Stamens 3; anthers oblong; filaments free at the top below connate with the style. Style curved, stout, shorter than the stamen with a rather large stigma. Ovary ellipsoid narrowed at both ends, hairy.

Hab. Very rare, one plant only found on Bukit Tangga, Negri Sembilan at 2,000 feet.

Very distinct from all other species in its pubescence and buff-ochre flowers. Nearest to *N. Zollingeri*.

SCITAMINEAE.

Kaempferia cyanescens Ridley. *Elettariopsis cyanescens* Ridley in Jour. Straits Branch Roy. As. Soc. 41, p. 31.

Rhizome short, stout. Leafy stems 2 feet 3 in. tall, slender, glabrous. Leaves oblong-lanceolate, long acuminate thin, base gradually narrowed blunt, 6 in. long, 1.25 in. wide; petiole very short or none; ligule ovate blunt .12 in. long. Flowers appearing with the leaves in a basal tuft an inch long; peduncle .25 in. long. Bracts lower ones ovate, upper ones lanceolate, 5 in. long, reddish-white. Ovary .1 in. long pubescent. Calyx slender tubular, spathaceous split on one side more than half way down with 3 small points 1.5 in. long. Corolla-tube 2 in. long, slender, lobes lanceolate acute, thin, white, 1 in. long, .12 in. wide. Staminodes lanceolate-acute as long but broader, white. Lip large obovate rather long-clawed, bilobed, violet veined with white. Anther white hairy.

Hab. Negri Sembilan, Bukit Tangga. Common on the hill behind the bungalow to the top.

This plant was collected first by Mr. Napier who brought me a specimen, the flower of which was of poor condition and I put it down as *Elettariopsis*. Having now seen plenty in the same locality I see it is a *Kaempferia* and re-describe it.

Alpinia campanaria Ridley, n. sp.

Tall plant. Leaves oblong cuspidate acuminate, glabrous except the ciliate edge, 2 feet long, 5 in. wide narrowed to base;

petiole 4 in. long, glabrous, ligule oblong .4 in. long. Raceme stout pubescent velvety, 11 in. long; flowers distant; peduncles 1.25 in. long, stout velvety. Bracts lanceolate, the lowest 2.25 in. long, upper ones broad and short, .5 in. long, silky. Involucral bracts cupular-campanulate .4 in. long .5 in. wide, silky containing 4 round, silky bracts each with a single flower on short silky pedicel. Calyx campanulate, silky with obscure points, white .5 in. long and as wide. Ovary small, silky. Corolla silky, tube .5 in. long, lobes oblong blunt, buff with white knobs at the top, .6 in. long. Lip broad obovate convolute, 1.5 in. long, 2 in. wide when expanded, white with a yellow base, and red bars. Stamen filaments broad linear, anther yellow, oblong, no crest. Staminodes large, broad, rhomboid with acute points at base of filaments.

Hab. Negri Sembilan, Bukit Tangga, at 2,400 feet alt., *Ridley*.

This is distinctly allied to *A. javanica* which it somewhat resembles in the form of bracts and flowers, but the inflorescence is laxly racemose.

***Alpinia Seimundii* Ridley, n. sp.**

Stem slender, sheaths and petiole pubescent. Leaves lanceolate acuminate with a long point, base narrowed unequal, midrib at back pubescent, 12 in. long, 2 in. wide; petiole .25 in. long, ligule oblong round silky. Panicle 5 in. long, pubescent with tufts of hairs below the branches; branches distant .5 in. long, usually 1-flowered. Bracts persistent broad, tubular with a rounded mouth silky .5 in. long. Calyx entire tubular dilate upwards with 3 small points, nearly .5 in. long silky. Corolla-tube slightly longer; lobes oblong blunt hairy .5 in. long. Lip obovate trilobed, .4 in. long and .3 in. wide, base narrowed, slender, lobes 2 rounded, median smaller bifid at tip with two slender points, 3 strong red nerves running to the tip of the midlobe and one shorter on each side. Staminodes very short obscure points at the base of the stamen. Stamen, filament rather slender; anther cells elliptic pointed below, hairy on the back.

Hab. Pahang, Kwala Teku, *Seimund*.

This has remarkably small flowers for the *Catimbium* section. It is apparently nearest to *A. multica*.

***Amomum spiceum* Ridley, n. sp.**

Plant forming a very large tuft of leafy stems 6 feet tall. Leaves narrow linear oblong acuminate narrowed to base, 18 in. long, 1 in. wide; ligule oblong, tip round entire, adnate to petiole. Flower spikes at base, 8 in. long peduncle 1 in. long, velvety as is rachis. Bracts erect lanceolate acuminate, edges hairy, papery 3 in. long, .5 in. wide, uppermost 2 in. long. Spikelets about a dozen consisting of three papery bracts containing a solitary flower.

Calyx spathaceous split in front, 1.5 in. long, buff. Corolla-tube as short, upper lobe broad oblong, 1.5 in. long, blunt, lower ones linear, buff. Lip large obovate entire, yellow finely punctate red on both sides at the base. Stamen shorter than corolla-lobes; filament longer than anther. Anther oblong, crest of two recurved horns with a small central process. Ovary silky.

Hab. Negri Sembilan, Bukit Tanga, abundant at 2,000 feet alt., in thick forest, *Ridley*.

ARACEAE.

***Amorphophallus elegans* Ridley, n. sp.**

Tuber small, flattened, globose, 3 in. through. Leaf, petiole slender mottled grey green, 1 to 2 feet tall, limb green, of 3 branches, outer pair rebranched; petiolules 3 inches long, leaflets 3 to 4 oblong, long cuspidate, base cuneate inaequilateral, nerves 11 pairs, secondary nerves nearly as conspicuous, all joining an intramarginal nerve, 6 in. long, 1.5 in. wide, cusp 1 in. long; secondary petiolules .12 in. long. Peduncle slender, 3 feet tall, mottled grey green, and pink with scattered light green blotches. Spathe narrow lanceolate acute, 5 in. long, pale green with small dark green blotches. Female portion of spike .5 in. long, green with yellow sessile stigmas. Male portion cylindric, 3 in. long. Stamens white; anther-cells pink. Appendage rugose cylindric, 4 in. long, white.

Hab. Mountain woods, Negri Sembilan, Bukit Tanga, *Ridley*.

***Pothos lorispatha* Ridley, n. sp.**

Climber, stem slender woody, internodes 1 in. long. Leaf thinly subcoriaceous, inaequilateral lanceolate long-acuminate; nerves numerous inconspicuous intramarginal .5 in. from the edge, base narrowed; 12 in. long, 3 in. wide; petiole 1.5 to 3 in. long, narrowly winged to the top, knee obscure, base shortly sheathing. Peduncle slender 1.25 in. long. Spathe narrow, strap-shaped acuminate acute, 4 inches long, .4 in. wide, dark green. Spadix narrow cylindric, 3 in. long, .12 in. through; peduncle .25 in. long. Bracts bluntly triangular at top, strongly keeled beneath. Sepals small, blunt triangular, hooded. Stamens shorter. Ovary oblong subquadrate at top. Stigma small circular.

Hab. Limestone cliffs, Selangor, Batu Caves, *Ridley*.

The leaves are thinner in texture than in most species and the spathe is strap-shaped.

PALMAE.

***Areca latiloba* Ridley, n. sp.**

Stem simple 4 to 5 feet tall, .5 in. through. Leaves three feet or more long with few broad sigmoid rhomboid lobes, broad at the

base, very long acuminate at the tip with 10 to 12 prominent nerves 1 foot long, 3 in. wide, the top pair very unequal. Spadix 9 in. long; branches slender in pairs on short .2 in. peduncles below, solitary above. Male flowers .18 in. long. Sepals very small, round. Petals lanceolate acute. Stamens 3, filaments connate at the base. Female flowers one on each branch or only on the middle branches. Sepals ovate acute. Petals broad oblong blunt .4 in. long. Fruit 1 in. long, .5 in. through, thin, fibrous coat.

Hab. Mountain forests, Negri Sembilan, Bukit Tangga at 2,400 feet alt., *Ridley*.

This is distinguished from *Areca pumila* Bl. by its smaller size, more slender stem, and broad sigmoid leaflets, resembling those of *Pinanga canina*.

***Pinanga glaucescens* Ridley, n. sp.**

A dwarf palm. Leaves 3 feet or more long, lobes very broad, oblong-lanceolate, long-acuminate with 6 to 12 prominent nerves, glaucous beneath 14 in. long, 3.5 in. wide, terminal pair connate at base for 6 inches, separate at top for 7 inches, with numerous terminal teeth, midrib spotted brown, young leaves maculate with darker spots. Spadix erect with two or three branches, stout peduncle 1.5 in. long; branches 4 in. long. Flowers spirally arranged. Sepals in female round, short. Fruit black on a red spadix ellipsoid, .5 in. long; Stigmas short sessile. Seed ellipsoid .4 in. long sparsely ruminant.

Hab. Mountain forests Negri Sembilan, Bukit Tangga at 2,400 feet alt., *Ridley*.

This species is near *P. Scortechinii*; but it is a shorter palm with much broader lobes to the leaves.

PANDANACEAE.

***Pandanus pilaris* Ridley, n. sp.**

Short bushy plant. Leaves dark green 8 feet long, 1 in. wide, 3-nerved linear acuminate with numerous very small thorns on the edges and 3 nerves in the upper part. Peduncles stout 8 in. long, obscurely 3-angled at the top with a broad lanceolate bract over 6 in. long. Male unknown. Female head globose, 4 in. through. Ovaries cylindric angled, nearly 1 in. long, .18 in. through slightly curved, acute. Stigma linear on the underside running to the tip.

Hab. Mountain forests 2,000 feet alt., Negri Sembilan, Bukit Tangga, *Ridley*.